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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,113	06/23/2003	Eugene F. Young	4847	2441
22896 7590 05/02/2007 MILA KASAN, PATENT DEPT. APPLIED BIOSYSTEMS 850 LINCOLN CENTRE DRIVE FOSTER CITY, CA 94404			EXAMINER HYUN, PAUL SANG HWA	
			ART UNIT 1743	PAPER NUMBER
			MAIL DATE 05/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

8

Office Action Summary	Application No.	Applicant(s)	
	10/602,113	YOUNG ET-AL.	
	Examiner	Art Unit	
	Paul S. Hyun	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 and 46 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 27-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-26, 38-42 and 46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/16/07</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

REMARKS

The RCE submitted by Applicants has been acknowledged. Claims 1-42 and 46 remain pending. Claims 1-18 and 27-37 remain withdrawn as being drawn to non-elected inventions. Applicants amended claims 19, 20 and 22. In summary, only claims 19-26, 38-42 and 46 will be considered on the merits.

The supplemental IDS submitted by Applicants has been acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **19-21, 23, 26, 38 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. (US 5,910,287) in view of Gilby (US 6,239,871 B1).

Cassin et al. disclose a multi-well plate comprising a lid on top of the plate and lenses formed on the bottom of the wells of the plate (see lines 40-67, col. 6). The lens can be used to facilitate fluorescence measurements (see lines 5-25, col. 16) wherein the measurement utilizes excitation optics for exciting the fluorescent compounds and collection optics for collecting the fluorescence. The multi-well plate disclosed by Cassin et al. differs from the claimed invention in that the reference does not disclose aplanatic lenses. The reference also does not disclose a single lens that can both excite and collect the fluorescence.

Art Unit: 1743

Gilby discloses a lens for conducting fluorescent measurements. It discloses a planar-convex lens 100 that is aplanatic for eliminating spherical aberration (see Fig. 3 and Abstract). The lens is capable of exciting the fluorescent compound and collecting the fluorescence emitted by the compound (see Fig. 4). In light of the disclosure of Gilby, it would have been obvious to one of ordinary skill in the art to provide an aplanatic plano-convex lens to the bottom of the wells of the plate disclosed by Cassin et al. so that a single lens can be used to conduct the fluorescence measurements. The lens would also eliminate spherical aberration.

With respect to claim 23, although Cassin et al. do not explicitly disclose the structure of the lid, flat well-plate lids are well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to provide a flat lid to the well-plate disclosed by Cassin et al.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. in view of Gilby as applied to claims 19-21, 23, 26, 38 and 46, and further view of Trost (US 6,066,245).

Neither Cassin et al. nor Gilby disclose a lens with a frusto-conical projection member. However, Cassin et al. do disclose that the wells of the well-plate can be of any shape (see lines 50-65, col. 6). Therefore, it would have been obvious to taper the wells of the modified well-plate disclosed by Cassin et al. and Gilby to facilitate the pipetting of the samples from the wells.

Trost discloses a plano-convex lens 102 for conducting fluorescence measurements (see Fig. 1). The lens comprises a round portion and a cylindrical projection portion. Given that the lens disclosed by Trost performs the same function as the lens disclosed by Gilby, it would have been obvious to provide the lens disclosed by Trost to the bottom of the wells of the modified plate disclosed by Cassin et al. instead of the lens disclosed by Gilby. It also would have been obvious to taper the projection portion of the lens disclosed by Trost such that it becomes frusto-conical to accommodate the shape of the tapered wells.

Claim **24** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. in view of Gilby as applied to claims 19-21, 23, 26, 38 and 46, and further in view of Warhurst et al. (US 6,896,848 B1).

Neither Cassin et al. nor Gilby disclose a metallic member.

Warhurst et al. disclose a flat cover adapted to seal the wells of a microtiter plate (see Fig. 1). The reference discloses that the cover can be made from a metal (see lines 65-67, col. 2).

In light of the teachings of Warhurst et al., it would have been obvious to one of ordinary skill in the art to provide a metallic cover to the wells of the modified plate disclosed by Cassin et al. and Gilby since metal is very strong.

Claim **25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. in view of Gilby as applied to claims 19-21, 23, 26, 38 and 46, and further in view of Sha et al. (US 2003/0235519 A1).

Neither Cassin et al. nor Gilby disclose a cover that is made from polypropylene.

Sha et al. disclose a flat cover adapted to seal the wells of a microtiter plate (see Fig. 4B). The reference discloses that the cover can be made from a transparent polypropylene (see [0027]).

In light of the teachings of Sha et al., it would have been obvious to one of ordinary skill in the art to provide a transparent polypropylene cover to the wells of the modified plate disclosed by Cassin et al. and Gilby since polypropylene is a resilient plastic.

Claims **40-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. in view of Gilby as applied to claims 19-21, 23, 26, 38 and 46, and further in view of Hijikata (US 3,932,132).

Neither Cassin et al. nor Gilby disclose an elongate portion.

Hijikata discloses an optical system adapted to detect particular analytes in a fluid. The system comprises a transparent reagent carrier 11 on which an absorptive reagent is disposed, a lamp 12a for projecting light onto the reagent, and a tubular light guide 12c that guides the light emitted by the lamp to the reagent carrier (see Fig. 2). The light guide focuses all the light emitted by the lamp towards the reagent carrier.

Art Unit: 1743

In light of the teachings of Hijikata, it would have been obvious to one of ordinary skill in the art to provide the modified plate disclosed by Cassin et al. and Gilby with a light guide to guide the light projected in to the wells.

Claims **19 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cassin et al. in view of Schroeder et al. (US 5,355,215) and as evidenced by Claytor (US 4,787,722).

As indicated above, Cassin et al. disclose a microplate for conducting fluorescence measurements. However, Cassin et al. do not disclose a Fresnel lens.

Schroeder et al. disclose a well-plate for conducting fluorescence measurements. The well-plate comprises Fresnel lenses on the bottom of the wells for exciting and collecting fluorescence (see Fig. 6 and lines 25-45, col. 6). Claytor discloses that Fresnel lenses are inherently aplanatic (see lines 10-15, col. 1). In light of the disclosure of Schroeder et al. and Claytor, it would have been obvious to one of ordinary skill in the art to incorporate Fresnel lenses to the bottom of the wells of the plate disclosed by Cassin et al. since Fresnel lenses are aplanatic and thus prevent spherical aberration.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

Art Unit: 1743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PSH
4/27/07


Jill Warden
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